

wherein each of said conduits is joined at a seam adjacent said inflow ends and upstream of each of said valves to form a single inflow end with a cross-sectional area larger than the cross-sectional area of any of the inflow ends of said valvular conduits.

32. (amended) The vascular prosthetic of claim 30 wherein the valvular conduits comprise first and second outflow ends, wherein at least one outflow end is suitable for attachment to a pulmonary trunk.

34. (amended) The vascular prosthetic of claim 30 wherein the valve of each valvular conduit opens at pressures as low as about 1mm Hg and remains sealably closed so as to withstand backflow pressures greater than about 200 mm Hg.

39. (amended) The vascular prosthetic of claim 30 wherein each of the valvular conduits is further joined adjacent their outflow ends and downstream of each of the valves to form a single outflow end of the vascular prosthetic.

40. (amended) The vascular prosthetic of claim 39 wherein a second seam joins the at least two valvular conduits adjacent their outflow ends and downstream of each of the valves to form the single outflow end of the vascular prosthetic.

Please add the following new claims:

51. (new) The vascular prosthetic of claim 30 wherein the seam includes a plurality of stitches.

52. (new) The vascular prosthetic of claim 51 wherein the stitches are formed in a single pass.

53. (new) The vascular prosthetic of claim 51 wherein the stitches are formed in more than one pass.

54. (new) The vascular prosthetic of claim 51 wherein the stitches are applied such that the stitches will not unravel when neighboring stitches are severed.

55. (new) The vascular prosthetic of claim 51 wherein the stitches include discrete stitches.

56. (new) The vascular prosthetic of claim 30 wherein the seam includes a biological sealant.

57. (new) The vascular prosthetic of claim 30 wherein the seam includes a chemical sealant.

58. (new) The vascular prosthetic of claim 30 wherein the seam is formed by laser beam radiation.


59. (new) The vascular prosthetic of claim 30 wherein the seam provides a smooth inner lumen.

60. (new) The vascular prosthetic of claim 30 wherein the fixed tissue conduits are fixed by an aldehyde.

61. (new) The vascular prosthetic of claim 30 wherein the fixed tissue conduits are fixed by gamma radiation.

62. (new) The vascular prosthetic of claim 30 wherein the fixed tissue conduits are fixed by a polyepoxy compound.

63. (new) A vascular prosthetic comprising:

 two valvular conduits, each of said conduits having an inflow end and an outflow end and a valve housed therein;

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wherein each of said conduits is joined at a seam at an angled slice adjacent said inflow ends and upstream of each of said valves to form a body having a single inflow end and a pair of legs each having an outflow end; the single inflow end with a cross-sectional area larger than the cross-sectional area of either of the inflow ends of said legs, said legs and said body forming a "Y" shape.

64. (new) The vascular prosthetic of claim 63 wherein the single inflow end is suitable for attachment to a heart to receive blood from the right ventricle.

65. (new) The vascular prosthetic of claim 63 wherein the valvular conduits comprise first and second outflow ends, wherein at least one outflow end is suitable for attachment to a pulmonary trunk.

66. (new) The vascular prosthetic of claim 65 wherein the first and second outflow ends are suitable for attachment to first and second pulmonary arteries.

67. (new) The vascular prosthetic of claim 63 wherein the valve of each valvular conduit opens at pressures as low as about 1mm Hg and remains sealably closed so as to withstand backflow pressures greater than about 200 mm Hg.

68. (new) The vascular prosthetic of claim 63 wherein the cross-sectional area of the inflow end of the vascular prosthetic is greater than about 22 mm.

69. (new) The vascular prosthetic of claim 63 wherein the cross-sectional area of the inflow end of the vascular prosthetic is greater than about 28 mm.

70. (new) The vascular prosthetic of claim 63 wherein the at least two valvular conduits are chemically fixed biological tissue.

71. (new) The vascular prosthetic of claim 63 wherein the angled slice is formed at an angle of less than about 15 degrees.

72. (new) The vascular prosthetic of claim 63 wherein the seam includes a plurality of stitches.

73. (new) The vascular prosthetic of claim 72 wherein the stitches are formed in a single pass.

74. (new) The vascular prosthetic of claim 72 wherein the stitches are formed in more than one pass.

75. (new) The vascular prosthetic of claim 72 wherein the stitches are applied such that the stitches will not unravel when neighboring stitches are severed.

76. (new) The vascular prosthetic of claim 72 wherein the stitches include discrete stitches.

77. (new) The vascular prosthetic of claim 63 wherein the seam includes a biological sealant.

78. (new) The vascular prosthetic of claim 63 wherein the seam includes a chemical sealant.

79. (new) The vascular prosthetic of claim 63 wherein the seam is formed by laser beam radiation.

80. (new) The vascular prosthetic of claim 63 wherein the seam provides a smooth inner lumen.

81. (new) The vascular prosthetic of claim 70 wherein the fixed tissue conduits are fixed by an aldehyde.

82. (new) The vascular prosthetic of claim 70 wherein the fixed tissue conduits are fixed by gamma radiation.

83. (new) The vascular prosthetic of claim 70 wherein the fixed tissue conduits are fixed by a polyepoxy compound.

84. (new) A vascular prosthetic comprising:

an inflow conduit comprising a manifold formed from the sealed attachment of a plurality of donor valved blood vessels, each of said blood vessels housing a biological valve integral therewith, said blood vessels configured to permit the flow of blood therethrough by the valve opening at a relatively low pressure and configured to prevent the backflow of blood therethrough by the valve closing so as to withstand relatively high pressures, said manifold formed upstream of each of the biological valves so as not to interfere with the effective operation of the biological valves, the inflow conduit with a cross-sectional area larger than the cross-sectional area of either of the inflow ends of each of the donor blood vessels, and an outflow conduit positioned downstream of each of the biological valves.

85. (new) The vascular prosthetic of claim 84 wherein the inflow conduit is suitable for attachment to a heart to receive blood from the right ventricle.

86. (new) The vascular prosthetic of claim 84 wherein the donor blood vessels comprise first and second outflow ends, wherein at least one outflow end is suitable for attachment to a pulmonary trunk.

87. (new) The vascular prosthetic of claim 86 wherein the first and second outflow ends are suitable for attachment to first and second pulmonary arteries.

88. (new) The vascular prosthetic of claim 84 wherein the valve of each donor blood vessel opens at pressures as low as about 1mm Hg and remains sealably closed so as to withstand backflow pressures greater than about 200 mm Hg.

89. (new) The vascular prosthetic of claim 84 wherein the cross-sectional area of the inflow conduit of the vascular prosthetic is greater than about 22 mm.

90. (new) The vascular prosthetic of claim 84 wherein the cross-sectional area of the inflow conduit of the vascular prosthetic is greater than about 28 mm.

91. (new) The vascular prosthetic of claim 84 wherein the plurality of donor blood vessels are chemically fixed biological tissue.

92. (new) The vascular prosthetic of claim 84 wherein the angle created by the manifold between the plurality of donor vessels is less than about 30 degrees.

93. (new) The vascular prosthetic of claim 84 wherein the sealed attachment includes a plurality of stitches.

94. (new) The vascular prosthetic of claim 93 wherein the stitches are formed in a single pass.

95. (new) The vascular prosthetic of claim 93 wherein the stitches are formed in more than one pass.

96. (new) The vascular prosthetic of claim 93 wherein the stitches are applied such that the stitches will not unravel when neighboring stitches are severed.

97. (new) The vascular prosthetic of claim 93 wherein the stitches include discrete stitches.

98. (new) The vascular prosthetic of claim 84 wherein the sealed attachment includes a biological sealant.

99. (new) The vascular prosthetic of claim 84 wherein the sealed attachment includes a chemical sealant.

100. (new) The vascular prosthetic of claim 84 wherein the sealed attachment is formed by laser beam radiation.

101. (new) The vascular prosthetic of claim 84 wherein the sealed attachment provides a smooth inner lumen.

102. (new) The vascular prosthetic of claim 91 wherein the plurality of donor blood vessels are fixed by an aldehyde.

103. (new) The vascular prosthetic of claim 91 wherein the plurality of donor blood vessels are fixed by gamma radiation.

104. (new) The vascular prosthetic of claim 91 wherein the plurality of donor blood vessels are fixed by a polyepoxy compound.

105. The prosthetic of claim 84 wherein the plurality of donor blood vessels each comprise a vein segment.

106. The prosthetic of claim 105 wherein the plurality of donor blood vessels each comprise the jugular vein of a donor quadruped or marsupial.

107. The prosthetic of claim 106 wherein the valved blood vessels each comprise the jugular vein of a donor caprine, cervine, canine, ovine, bovine, equine or marsupial.

108. (new) A vascular prosthetic comprising:

at least two fixed tissue valvular conduits, each of said conduits having an inflow end and an outflow end and a valve of fixed tissue housed therein, each of said conduits comprising the jugular vein of a donor quadruped or marsupial;

wherein each of said conduits is joined adjacent said inflow ends and upstream of each of said valves to form a single inflow end with a cross-sectional area larger than the cross-sectional area of any of the inflow ends of said valvular conduits.

109. (new) The vascular prosthetic of claim 108 wherein the single inflow end is suitable for attachment to a heart to receive blood from the right ventricle.

110. (new) The vascular prosthetic of claim 108 wherein the valvular conduits comprise first and second outflow ends, wherein at least one outflow end is suitable for attachment to a pulmonary trunk.

111. (new) The vascular prosthetic of claim 108 wherein the first and second outflow ends are suitable for attachment to first and second pulmonary arteries.

112. (new) The vascular prosthetic of claim 108 wherein the valve of each valvular conduit opens at pressures as low as about 1mm Hg and remains sealably closed so as to withstand backflow pressures greater than about 200 mm Hg.

113. (new) The vascular prosthetic of claim 108 wherein the cross-sectional area of the inflow end of the vascular prosthetic is greater than about 22 mm.

114. (new) The vascular prosthetic of claim 108 wherein the cross-sectional area of the inflow end of the vascular prosthetic is greater than about 28 mm.